



CORADIA REGIONAL TRAINS
MEETING YOUR SPECIFIC NEEDS

ALSTOM

REGIONAL FLEETS GET SMART



GREAT REGIONAL EXPECTATIONS

With European railway markets opening to new players and a growing percentage of the public ready to forego their cars, regional rail is on the rise. The opportunities are undeniably there for rail operators. However, higher passenger expectations, tighter regulations and budget considerations weigh heavily in this new rail context. To assure commercial success, you need to tailor your services as closely as possible to your own markets. Choosing the right fleet for your needs is the key. Along with the obvious safety and service reliability concerns, foremost on the minds of today's regional rolling stock buyers is getting the best value for money in terms of acquisition, operation and life cycle costs. Of equal importance are the needs for increased passenger comfort and a high degree of flexibility to meet short-term needs. Series cars that can be fitted in different ways and trainsets easily reconfigured for fluctuating demand represent a major advance for regional operations.

CELEBRATING DIVERSITY



ALSTOM'S RESPONSE

The high-performance Coradia range of regional rolling stock encompasses a broad scope so that regional rail operators of every size, public and private, can specify the solution that works best for their unique market reality and brand strategy. Our large portfolio of regional trains allows you to order a single fleet of diverse, service-proven trains with varying adaptations for use in easily modified configurations. While the individual cars are tailored to your diverse requirements, the components and parts used throughout the range are standard, uniform and service-proven, keeping costs and maintenance in hand.

ENERGY MINDFUL

We are committed to optimizing your energy consumption. Coradia's Onix IGBT traction system is energy efficient while delivering smooth acceleration. The EMU versions are standard equipped with the most efficient regenerative braking system. We can provide a projected analysis of energy consumption for your service, based on your timetables and line profile.

TAILOR YOUR CORADIA

Tailor your Coradia to your service needs. Among your choices are:

- Power supply:** Diesel, electric or hybrid, in one of the four European power standards or dual power supply allowing cross-border service.
- Architecture:** Floor height, single or double deck, vehicle gauge (the Continental UIC loading or Nordic wide gauge)
- Configurations:**
 - **Coradia Continental** – 3, 4, 5 or 6-car EMUs (Electric Multiple Units). Up to 4 trainsets may be coupled to optimize rail line slots during peak periods.
 - **Coradia Nordic** – 4, 5 or 6-car EMUs (Electric Multiple Units)
 - **Coradia Lint** – 1, 2 or 3-car DMUs (Diesel Multiple Units). Up to 3 trainsets may be coupled.
 - **Coradia Duplex** – 2, 3, 4, 5, 6 or 7-car EMUs. Up to 4 trainsets may be coupled, with a limit of 12 cars in total.
- Interiors:** a wide range of design possibilities for passenger comfort and safety.

PUSH-PULL TRAINS

For regional train operators who need push-pull trains configurations, Alstom offers passenger locomotives and coaches.

PASSENGER APPEAL



CUSTOMIZED TRAINS FOR CUSTOMER NEEDS

Our large portfolio of regional trains allows operators to order a single fleet of highly modular trains whose cars can be tailored individually to their specific operational needs and reconfigured for different service needs, such as higher capacity at peak times, high density routes or seasonal fluctuations. Thanks to distributed power the high level of performance remains unchanged. Maintenance is also optimized thanks to the use of uniform subsystems and parts throughout the Coradia range.



DESIGN FOR COMFORT

Passenger comfort is a defining factor in the success of your rolling stock. Each train within the Coradia range has been designed to deliver the best onboard experience to your passengers. Partition walls between the vestibule and passenger compartments improve acoustic and thermal comfort. The interiors are designed as a series of convivial areas with amenities including ambient lighting, luggage racks and storage areas for strollers, wheelchairs, bicycles or skis. Passenger amenities include PC sockets, individual lighting and video and audio systems. Also possible are hot-drinks vending machines, in-train ticketing dispensers and tables. Features accessible to people with reduced mobility include specially adapted toilet facilities. For operators, to simplify changes to interiors, modular interior fittings, including seats, tables and wall partitions, are fixed in slots for easy redistribution. Operators can specify seat pitching and configuration.

E-CAPABILITY ON CORADIA TRAINS

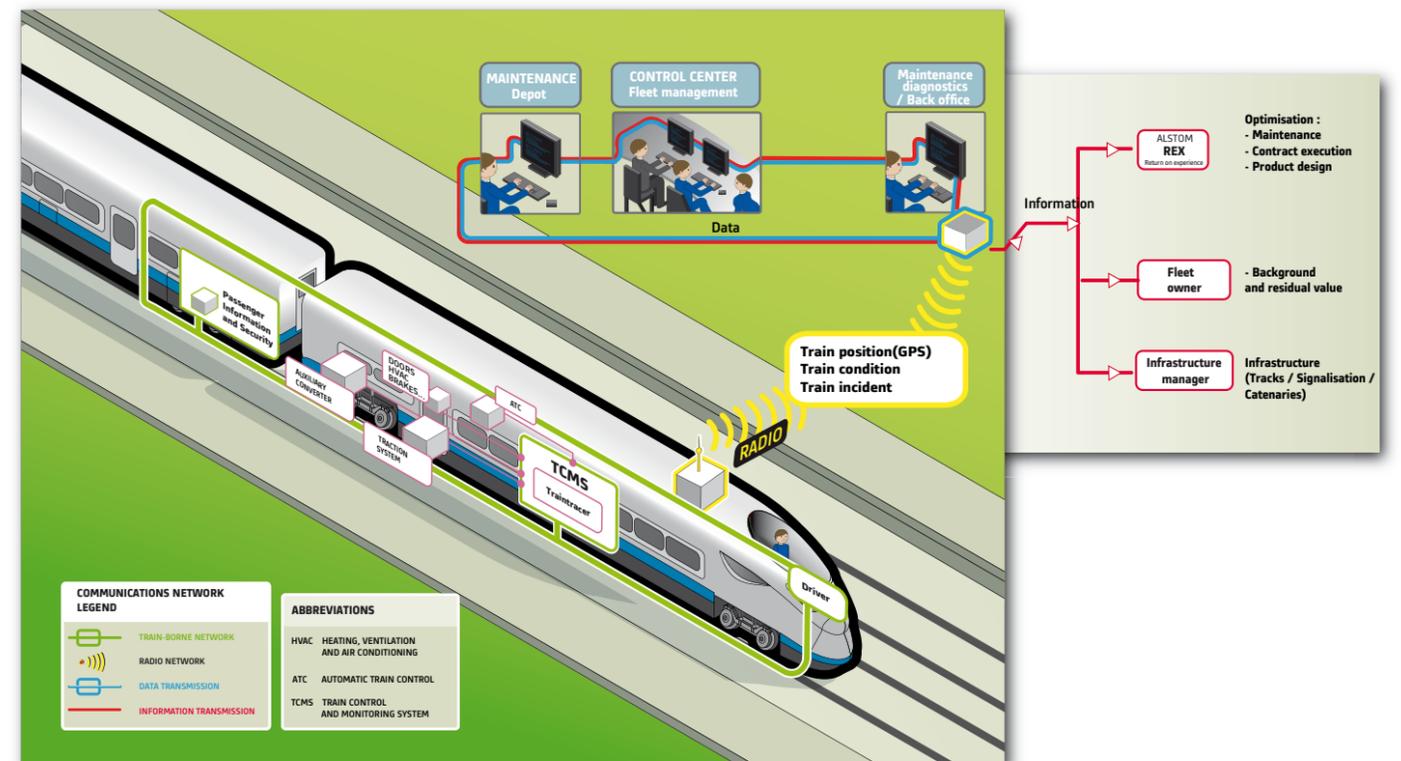
Our standard onboard information processing system allows the driver and maintainers to have access to a wealth of functions including the ATC (Automatic Train Control System), global maintenance help, assistance to equipment maintenance, driving data input (in events recorder), onboard equipment testing, and control of the train information display system. The onboard computer system can control the interlacing.

Our TrainTracer e-maintenance module is a specially developed function connected to the main processor unit. It generates a continuous flow of data and information concerning the status and wear trend of the train's main components. This data is then dispatched to the technicians either on demand via a PC when the train is at the depot or in real-time during operation (via the Ethernet network). Technicians can then analyze and understand the data to diagnose failures and better prepare maintenance interventions in case of failure. They also anticipate possible problems and prevent failures to increase the fleet availability, analyze stored information on fleet operations, and advise the operator of events in real time with structured information.

Coradia EMU trains can come with built-in internet capabilities. Operators can opt to provide passengers with an onboard entertainment system for Wifi services and internet connectivity, audio or visual information and entertainment or add such amenities during a later upgrade. Coradia trains can also integrate one or more national ATP (Automatic Train Protection) systems as well as ETCS (European Train Control System).

Five reasons to choose Coradia

- 1. Fleet diversity** – operators order a single fleet of trains with cars tailored individually to give them the widest operational diversity.
- 2. Reliability guaranteed** – service-proven components and parts are used throughout the Coradia range.
- 3. Top flexibility** – low-floor interiors allow maximum flexibility in interior layouts, resulting in the highest levels of passenger comfort, especially for people with reduced mobility.
- 4. Maintenance made easy** – the arrangement of the equipment speeds access; uniform service-proven components simplify interventions and cut costs.
- 5. Environmentally friendly** – energy savings are made through improved traction efficiency, regenerative braking (EMUs) and managed lighting systems; high level of recyclability; low external noise levels.





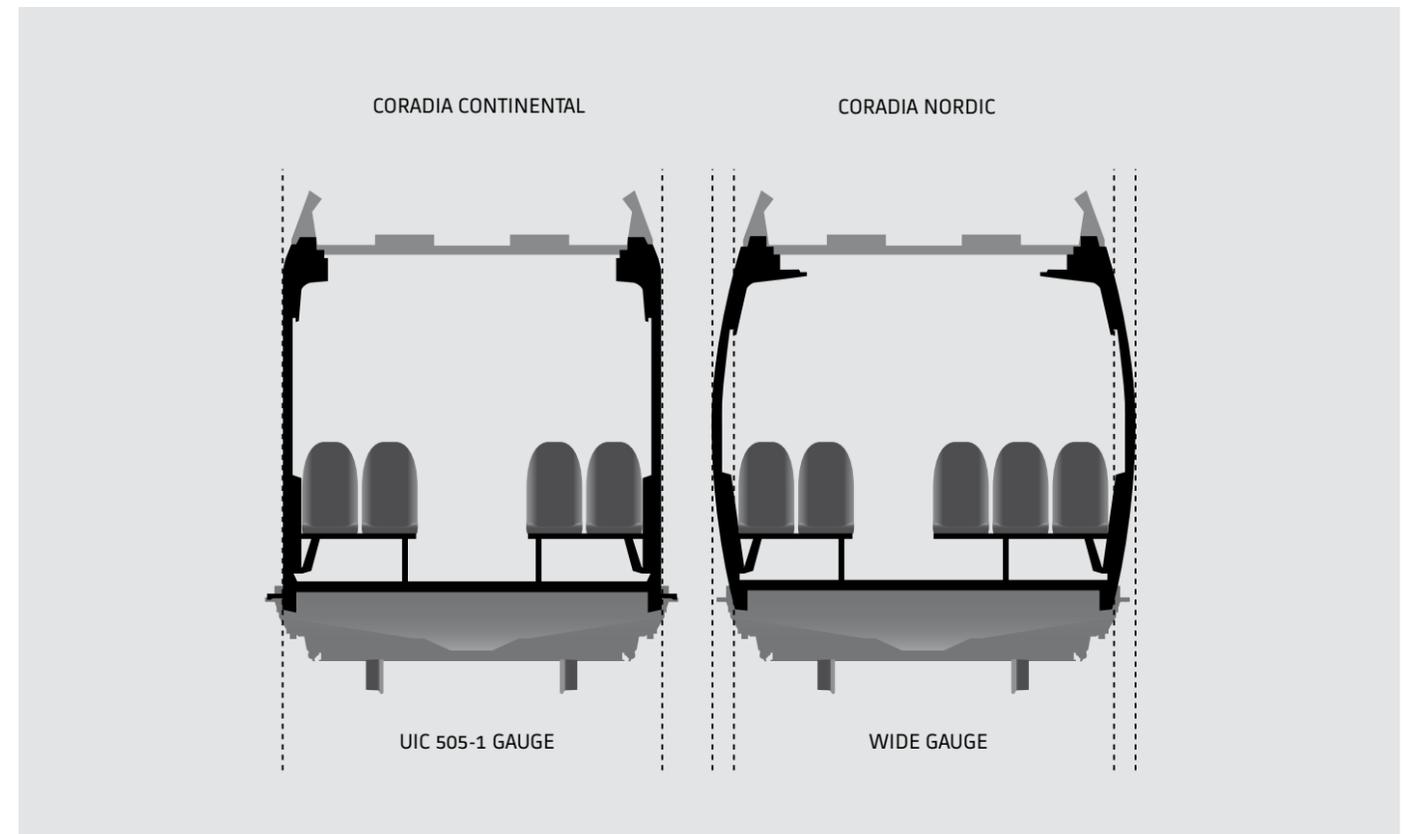
Coradia Continental for Deutsche Bahn



Coradia Nordic for Stockholm Transport (SL)

CORADIA CONTINENTAL AND CORADIA NORDIC, AN EXTENDED RANGE

Best-selling suburban, regional and regional express trains, the Coradia Continental and Coradia Nordic lines are thoroughly service proven. Both can be supplied as full low-floor vehicles for easy passenger access, a feature made possible by relocating undercarriage equipment on the roof – a positioning which also facilitates maintenance. All Coradia trains share the same modular design to give operators flexibility to configure trains to meet their operational constraints and brand strategies. With an approximately 95% rate of recyclability, all are environmentally friendly.





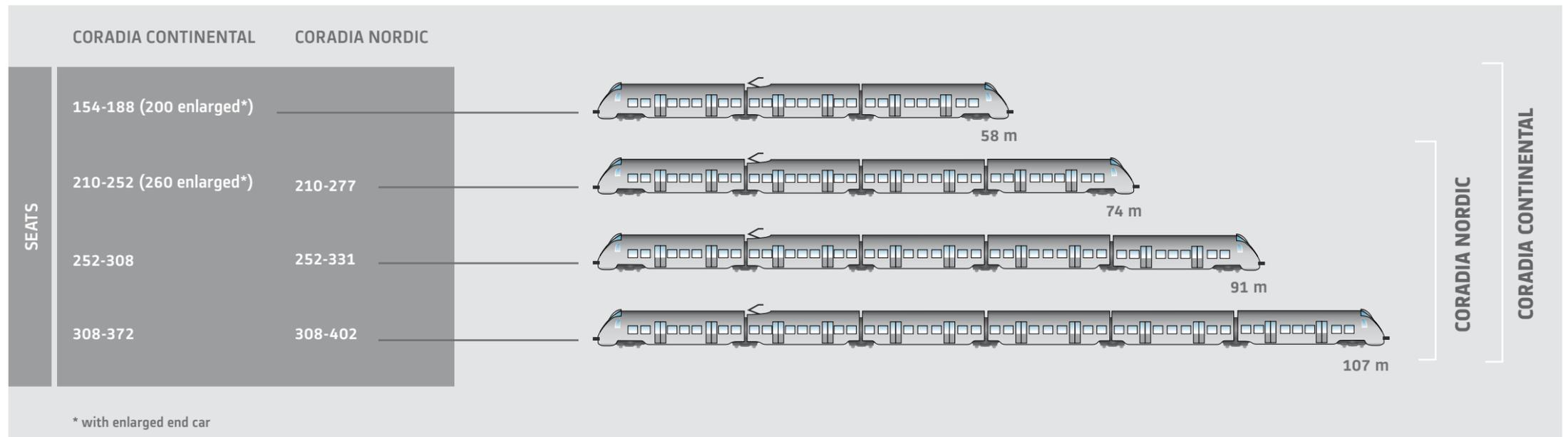
Coradia Nordic at ease despite the bitter cold (-35°C)

CORADIA CONTINENTAL SPACIOUS AND ADAPTABLE TRAINS

Like the Nordic, the Coradia Continental owes its roomy interiors to the fact that the traction equipment is roof-mounted. Developed for German and other European markets, the Continental conforms to the UIC loading gauge standard. It is adaptable to different platform heights, between 550 mm and 760 mm.

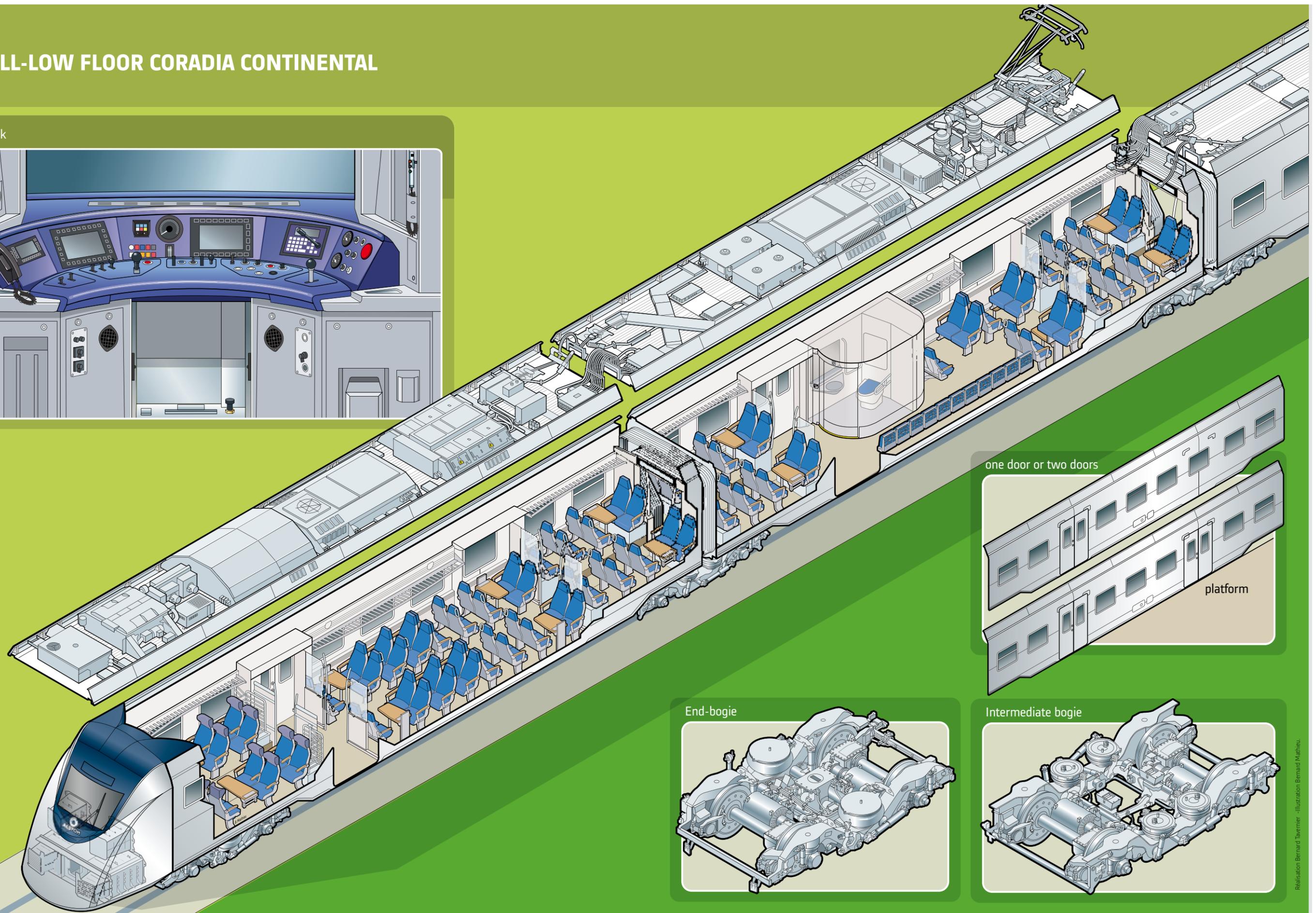
CORADIA NORDIC HANDLING THE COLD IN STRIDE

The Coradia Nordic, a wider body train for Northern Europe's gauge standard, is built to stand up to rigorous Scandinavian winters, operating at -35°C and garaged at -40°C. With roof-mounted traction equipment, there is more room for comfortable seating and passenger amenities.

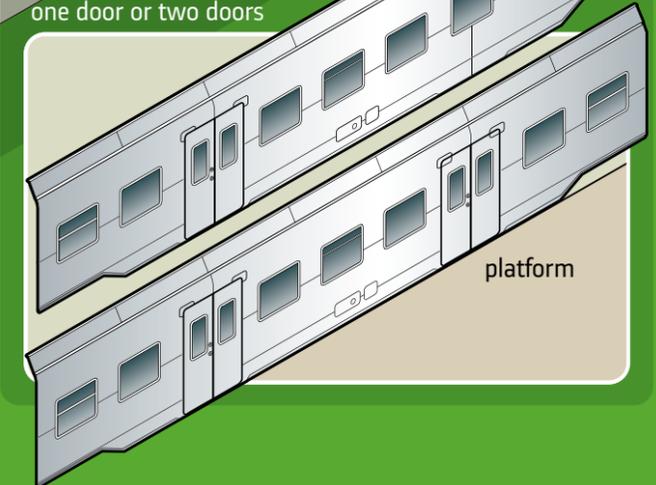


THE FULL-LOW FLOOR CORADIA CONTINENTAL

Driver's desk

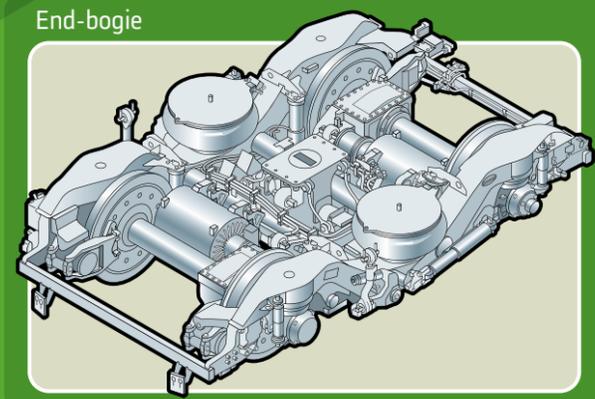


one door or two doors

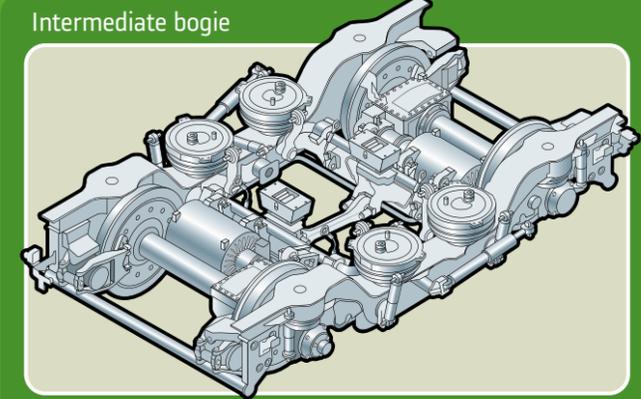


platform

End-bogie



Intermediate bogie





Deutsche Bahn's Supplier of the Year 2008

Deutsche Bahn (DB) named Alstom as its 2008 "Supplier of the Year" in recognition of the excellent work relationship that flourished between the two over the 24 months leading to the delivery of 27 Coradia Lint regional trains. Among DB's evaluation criteria: reliability, responsiveness, contractual commitment, cost reduction and continual process improvement, as well as understanding customer goals and expectations. The Coradia Lint fleet, ordered in 2006 and manufactured from December 2007 to September 2008, entered service in December 2008. Alstom has already supplied DB with 146 Coradia Lint trains and 80 Coradia Continental trains. In July 2008 DB placed a new frame contract for up to 180 additional Coradia Lint trains.



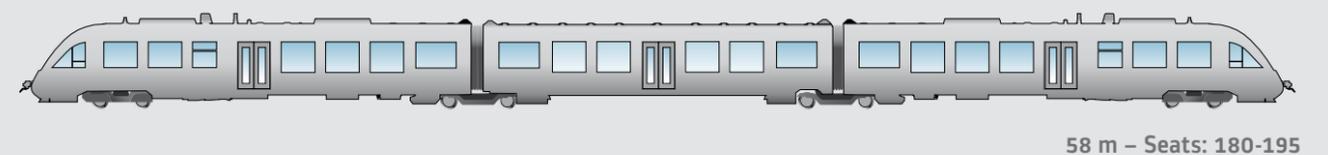
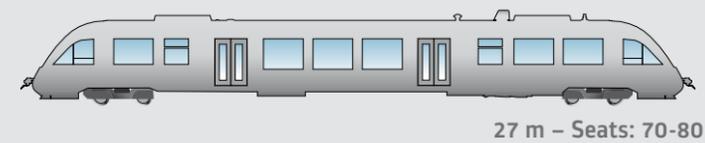
CORADIA LINT, ADAPTING TO YOUR REGIONAL REALITIES

EMBRACING MARKET DIVERSITY

The Coradia Lint meets today's market realities in regional rail, offering operators the balance they need between uniformity and diversity. First developed for German markets, this addition to the Coradia family offers all the operating and maintenance advantages of a standard product, while allowing operators to customize cars to meet their varied market needs: floor height (600 or 780 mm), power packs (335 kW or 390 kW), trainset configuration, energy absorption...it's the operator's call. DB Regio was quick to recognize the usefulness of this high level of modularity in a service-proven train, ordering 146 one or two-car trainsets to operate in different regions. To date, nearly 500 Lint vehicles have been purchased by 14 different operators.

The Coradia Lint, uniquely in DMU, comes in configurations of 1, 2, and 3 cars. Up to three sets can be run in a multiple unit. Low-floor sections are maximized by keeping the diesel powerpack in the underframe. The rolling stock conforms to new European environmental standards and is ready to evolve to new crashworthiness standards.

CORADIA LINT





The Coradia Duplex, the world's most sold double-deck EMU.

CORADIA DUPLEX, HIGH CAPACITY AND PASSENGER COMFORT

When your regional lines are nearing saturation but your passenger numbers are still climbing, the Coradia Duplex is your best solution. This Coradia delivers the same high levels of passenger comfort while allowing you to significantly increase your capacity. It is a peerless solution in terms of the quality-to-cost ratio it offers.

The Coradia Duplex gives you the flexibility you need, with train set configurations available from two to seven cars—without compromising traction performance. As each car has an equally distributed motorization, you can rely on the same top-quality performance however you configure your train, an advantage only Alstom offers. Capacity can range from 220 seats to 810 seats (54.7 m to 186.7 m train length).

CORADIA DUPLEX



(*) Seat pitch: 1740mm (68,5 inch) "in 2nd class configuration"

There are two variations in the Coradia Duplex range: the Coradia Duplex developed in close coordination with Swedish operator SJ for its regional operations, and the Coradia Duplex developed in partnership with France's SNCF for regional operations in France and Luxembourg. Both versions use the same service-proven modules. The interchangeable equipment is mounted on the roof for easy maintenance.

CORADIA DUPLEX FOR FRANCE...

SNCF, eight French regions and Monaco chose our Coradia Duplex as the best solution to their transport needs with their orders for a total of 723 passenger cars in 2000 and 2008. The trainsets, which will operate at 160 km/h, are in 2 to 5-car configurations with a first and second class, offering operational flexibility with a maximum capacity of 570 seated passengers. The highly comfortable trains include a passenger information system and special features for the mobility impaired as well as flexible areas for storage use.

...AND LUXEMBOURG

Luxembourg national operator CFL ordered 22 three-car Coradia Duplex

trains and two additional cars (a total of 68 cars) in 2001 and 2008 as part of a mutual strategy to increase synergies with France's SNCF. These trains, very similar to the French order, will operate on trans-border links between France and Luxembourg and also on the Belgian network. The EMUs, which have a capacity of 330 seated passengers per train, will run at 160 km/h.

CORADIA DUPLEX FOR SWEDEN COMFORT IN A COLD CLIMATE

Sitting in a warm, cozy rail carriage as the frozen world flies by has to be one of the most pleasant travel experiences an operator in a cold climate can offer passengers. The Coradia, developed for service in Sweden's highly populated Mälardalen region, fulfils this mission, traveling between the capital Stockholm and six major cities at up to 200 km/h. The 113-car fleet, introduced in 2004, has allowed Swedish national operator SJ to increase its passenger numbers while maintaining the highest levels of comfort and safety. With its 97% availability rate, this Coradia Duplex, which operates normally down to -35°C, has proven reliability in extreme conditions. The cars have been designed for easy access and movement throughout the train, with interiors that are flexible enough to be easily adapted for different use. It respects the operator's stringent environmental policies.

CORADIA KNOW-HOW APPLIED TO SPECIFIC NEEDS



Trenitalia's three-car Meridian EMU, total capacity 284.



MERIDIAN, THE ITALIAN CORADIA

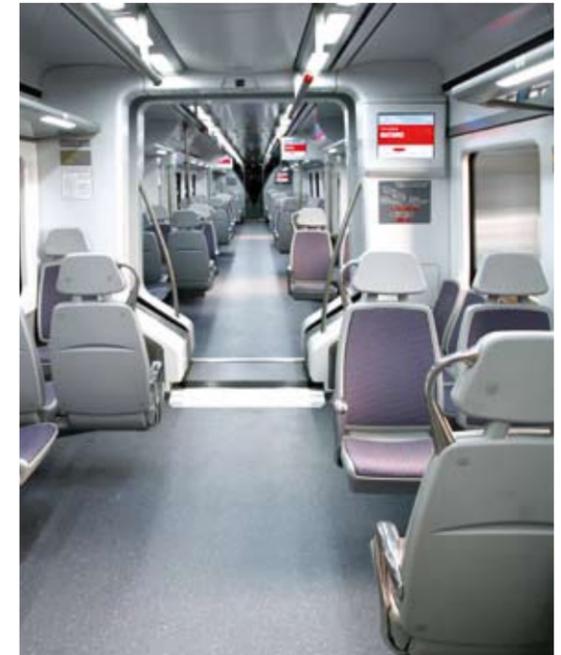
This Coradia Meridian EMU was developed specifically for Trenitalia and regional operators in Italy. Trenitalia, who calls it the "Minuetto", needed a modern, highly flexible and reliable train to meet its rising needs in regional rail transport. To assure its appeal with Italy's design-conscious public, Alstom responded with a Coradia styled by the renowned Italian automobile designer Giorgetto Giugiaro. Inside the partial low-floor train are spaces for stowing baggage and other bulky objects like bicycles and skis. The convivial interiors include lounge-style areas with sockets for telephones, portable computers and video games. Display screens are visible from all parts of the train and audio information is also available in Braille for the visually impaired. Further enhancing passenger comfort, reduced in-car noise and vibrations have set a new standard in regional trains. Both passenger and driver areas are air conditioned. To facilitate access for people with impaired mobility, each train is equipped with three automatic access doors, including one with an access ramp. To optimize operations, the train is equipped with the latest generation centralized information system (TCMS), which detects breakdowns and incidents via sensors placed throughout the train, and also controls the driver's maneuvers to guarantee safety.

Manufacturing

These three-car articulated trains exist in electric (EMU) and diesel (DMU) versions. Six Alstom sites in three countries are involved in the design and manufacture of the Coradia Meridian: Salzgitter, Germany (bogies); Savigliano (project management), Colleferro (manufacture), Sesto San Giovanni (auxiliaries and control systems) and Bologna (safety equipment) in Italy; and Charleroi, Belgium (traction systems). Alstom has supplied a total of 248 Coradia Meridian trains since 2001 to Trenitalia and six other Italian rail operators.

CIVIA, SPAIN'S REVOLUTIONARY COMMUTER AND REGIONAL TRAIN

Spanish rail transport operator RENFE will begin introducing the 5-car Civia IV into its regional service in September 2009 as part of its ongoing program to modernize its fleet of commuter trains. Alstom is supplying 30 Civia trainsets as well as their maintenance for a period of 14 years. Constructed in aluminum, the vehicles have been designed to reduce noise levels inside the train. They will be air conditioned and equipped with video screens. Access and inside mobility will be made easier for disabled people, thanks to dedicated areas and adapted toilets. The trains will also employ computer-based onboard control systems, sending train information via digital transmission to the command centre and depot workshop. Onboard computers will also make self-diagnostic applications possible, which helps reduce maintenance costs.





CORADIA WITHIN THE FULL ALSTOM OFFER

The Coradia can be associated with any of our comprehensive rail transport services and solutions.

INFRASTRUCTURE SOLUTIONS

Alstom offers a complete portfolio of rail transport infrastructure services, with the expertise and facilities to assure the success of any project. We design and supply new systems, upgrade existing ones and provide maintenance for any length of time: track work, catenaries, power supply, control systems, station utilities and depot workshops. We can provide project management for integration and commissioning on a full turnkey basis or separately.

INFORMATION SOLUTIONS

Alstom supplies rail operators with the full information solutions that allow them to operate their network in complete safety. We can provide

our full system, Atlas, or smaller modules or products, as required. Atlas is Alstom's upgradeable modular system designed for ERTMS (European Rail Traffic Management System). It offers all the functions required to optimize a network, from managing the rail network to automated train protection products, traditional locking and signaling.

MAINTENANCE SERVICES

We maintain trains of all types worldwide, whether manufactured by Alstom or another company. Our experience as manufacturers, enriched by two decades of maintenance work in close collaboration with operators, enables us to deliver high quality maintenance services for fleet availability, reliability and longevity. We offer preventive management specifically adapted to your trains to maintain their peak performance. Alstom offers a privileged partnership tailored to your needs – for a limited time or for the full life of your train, managing your depots and personnel or providing our own.

Through its know-how and the excellence of its products, Alstom is shaping the future of energy and transport infrastructure and contributing to improving the living and working conditions of people throughout the world. Today, more than 60,000 people in 70 countries are making an active contribution to the growth and development of its business.

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